Helpful Hint – Calculate Buffer Area for CRP/CREP Eligibility

Description. By creating a buffer area around a streambank line and laying it over the digitized land unit areas, calculate the eligible buffer areas for use with CRP/CREP. A digital ortho image (DOQ) of the area is needed as a base. It is also assumed that the planned land unit boundaries have already been digitized.

Instructions.

From View Window, turn on the digital ortho image and the planned land unit themes. Zoom in to display only the area of concern.

NOTE: It is best to identify a colored hatch pattern for your planned land unit theme so the DOQ is visible (by using Legend Editor).
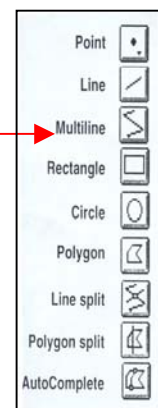
Create Temporary Streambank Line

1. From Extensions Window, select **New Toolkit Theme** button
   - Select **Line** under *Build Your Own*.
   - Enter **Stream Line** for *Theme Name:*
   - **OK   (NOTE: the dashed line around the new theme checkbox indicates the new theme is in edit mode)**

2. From View Window, select **Theme; Properties**
   - In dialog box, select **Editing**
   - Check **Interactive** under snapping section
   - Tolerance value: **500 feet**
   - Close Theme Properties dialog box

3. Select **Multiline** Drawing Tool

Point	.
Line	/
Multiline	⟩
Rectangle	□
Circle	○
Polygon	⟁
Line split	⊠
Polygon split	⊿
AutoComplete	⟁

4. *Left click* in image to register each point along streambank near the land units being considered for eligibility. Make sure you are zoomed in to at least a **1:4800 scale** and that you have examined the DOQ carefully to account for tree shadows.

5. *Dbl-click* left button to finish the streambank line feature

6. When done, select **Theme; Stop Editing**
   - Save Line? **YES**

The newly digitized streambank line should now be highlighted.
(If not, use the **Select Tool** to select and highlight the streambank line.)

Create Buffer Around Streambank Line

Using the line you digitized along the streambank closest to the fields involved for the CRP/CREP application, create a buffer area. The area of the buffer that extends into the fields will be the eligible area.

1. From the Extensions Window, select the Buffer icon

2. In the Buffer dialog window:

    Width/Distance: **100** (or other desired buffer width)
    Units: **feet**
    Buffer Type: **Line**
    - **Create new theme**
    Toolkit Theme: **Polygon**
    Theme Name: **Stream Buffer Area**
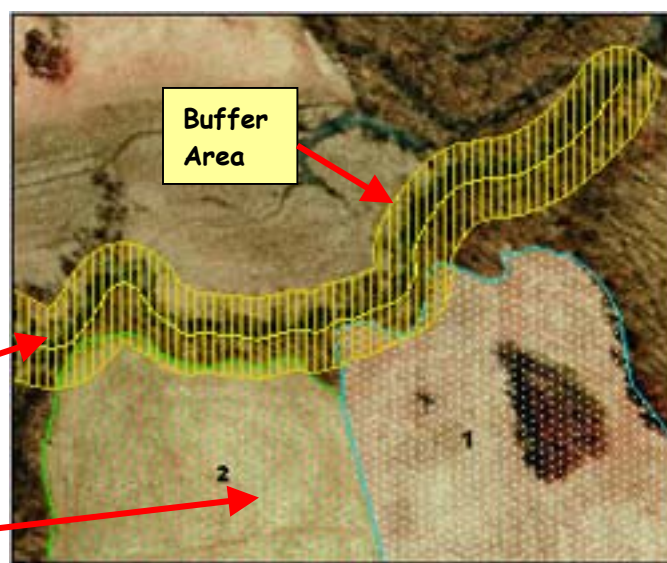   File Name: …**Resource_Maps\polygon.shp** (take default)
    Click **OK**

3. Wait while ArcView processes the new theme for the Stream Buffer Area

4. Modify the new Stream Buffer Area fill pattern using the Legend Editor so that both the land unit boundaries and the digital ortho image is visible.

Buffer Area

Digitized Stream Line

Land Units (two fields)

Calculate Eligible Area

1. Select **View**

2. Select **Geoprocessing Wizard**

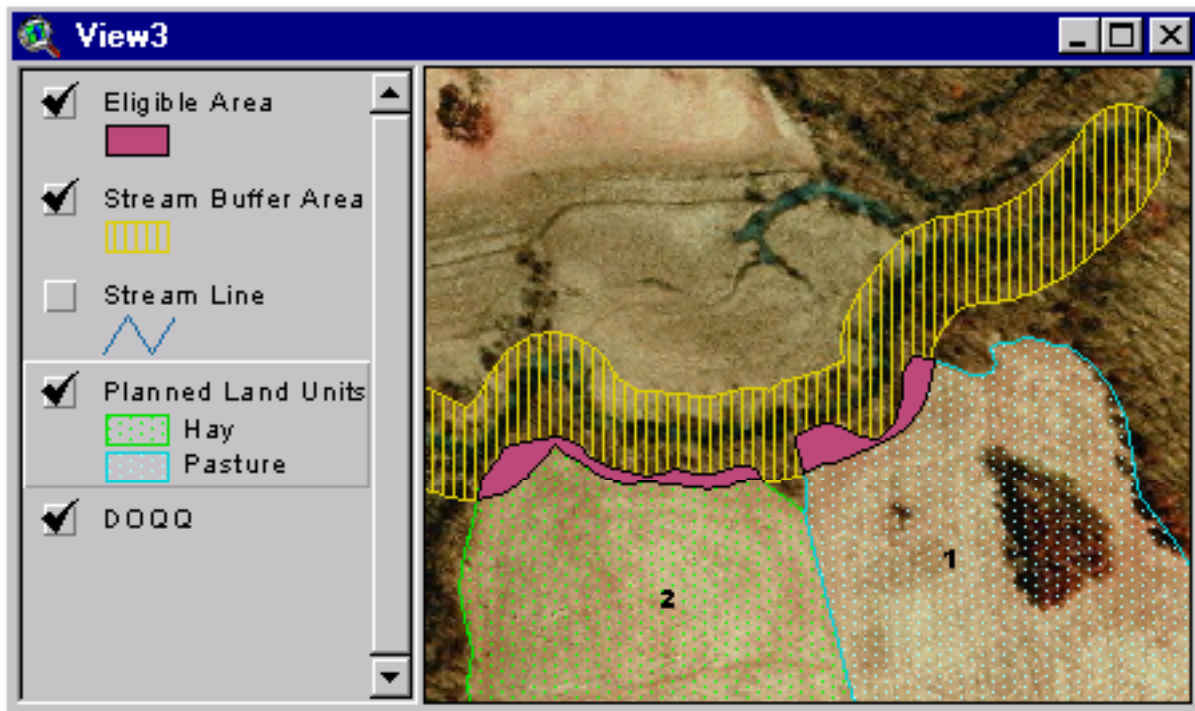   - ***Intersect two themes***
    Next>>

    > 1) Select input theme to intersect:
    >   **Planned Land Units**
    > 2) Select an overlay theme:
    >   **Stream Buffer Area**
    > 3) Specify the output file
    >   Output file: *Browse* to **c:/customer-files/[cust_id]/resource_maps**
    >   Type a new filename: **EligibleArea.shp**
    > **OK**

    Finish

3. Wait for process to complete. The newly created EliglbleArea.shp theme will be added to the view.

Find Calculated Acres for Eligible Areas

There are <u>two</u> quick ways to find the acre amounts for the eligible areas.

1   *Click* on **EligibleArea.shp** theme to activate it.
Select **Open Theme Table** icon.
Scroll over to the far right side of the table and look in the **CalcAcres** field.
NOTE: There are several acreage fields in this table. The <u>CalcAcres</u> field is the one with the acre amounts for the eligible areas.

2   *Click* on **EligibleArea.shp** theme to activate it.
Use the **Select** icon, and *click* on one of the eligible area within the view.
From the Extensions Window, select the **Total Acres** button.
Repeat for each eligible area.

Place Acreage Amount on Eligible Areas Within the View (optional)

1. <u>Define CalcAcres field within the table to use for the label</u>:

   With the EligibleArea.shp theme still activated, select **Theme, Properties**.

   Select **Text Label** icon on <u>left side</u> of screen.

   Using choice list, change *label field* to **CalcAcres** and *click* **OK**.

2. <u>Define desired text format for label</u>:

   Select **Window, Show Symbol Window**

   Select items from the Font and Color Palettes to format text for the label. For example, select **Arial** for font, **7** for size, and **black** for color.

3. <u>Add the labels to the View image</u>:

   On the Button Bar (top of the screen), select the **Text Label** icon.

   Click on each eligible area in View window at desired placement for the eligible area acreage.